

ABSTRACT OF THE DISCLOSURE

A semiconductor memory device having a gate insulation film, comprising a semiconductor substrate; a memory cell array formed on the semiconductor substrate, the memory cell array including a plurality of memory cell transistors, each of which has the gate insulation film; a first interlayer insulation film covered the memory cell array and including deuterium; a silicon nitride layer formed above the first interlayer insulation film; and a second interlayer insulation film formed above the silicon nitride layer, and including deuterium, a density of deuterium in the first interlayer insulation film being higher than that of deuterium in the second interlayer insulation film.